INFLUENCE OF NON-PROPAGATING CRACKS ON CONSERVATIVE BUCKLING OF COLUMNS.

Al-Shayea, Naser A.R., Baluch, Mohammed H., Azad, Abul K

Transactions of the Canadian Society for Mechanical Engineering
Vol. 11, Issue.4, 1987

Abstract: This paper deals with the conservative buckling of columns in the presence of non-propagating cracks. A single non-propagating crack has been modeled as an elastic rotational spring of stiffness 1/c, where c is the additional compliance due to the presence of the crack. Both static and kinetic methods of elastic stability have been used and results are presented for several column end conditions and crack parameters.